

Title (en)
MEMORY DEVICE INTERFACE AND METHOD

Title (de)
SPEICHERVORRICHTUNGSSCHNITTSTELLE UND VERFAHREN

Title (fr)
INTERFACE DE DISPOSITIF DE MÉMOIRE ET PROCÉDÉ

Publication
EP 4085458 A4 20230531 (EN)

Application
EP 20909806 A 20201229

Priority
• US 201962954954 P 20191230
• US 2020067319 W 20201229

Abstract (en)
[origin: US2021200464A1] Apparatus and methods are disclosed, including memory devices and systems. In an example, a memory module can include a first stack of at least eight memory die including four pairs of memory die, each pair of the four pairs of memory die associated with an individual memory rank of four memory ranks of the memory module, a memory controller configured to receive memory access commands and to access memory locations of the first stack, and a substrate configured to route connections between external terminations of the memory module and the memory controller.

IPC 8 full level
G11C 5/04 (2006.01); **G06F 11/10** (2006.01); **G06F 13/16** (2006.01); **G11C 5/06** (2006.01); **G11C 29/12** (2006.01)

CPC (source: EP KR US)
G06F 3/0604 (2013.01 - US); **G06F 3/0655** (2013.01 - US); **G06F 3/0679** (2013.01 - US); **G06F 11/1048** (2013.01 - EP KR); **G11C 5/025** (2013.01 - KR); **G11C 5/04** (2013.01 - EP KR US); **G11C 5/063** (2013.01 - EP KR); **G11C 7/1006** (2013.01 - US); **G11C 29/1201** (2013.01 - EP KR); **G11C 5/025** (2013.01 - EP); **G11C 2029/1206** (2013.01 - EP KR)

Citation (search report)
• [IY] US 2006126369 A1 20060615 - RAGHURAM SIVA [DE]
• [Y] US 2014252656 A1 20140911 - LEE JONG-JOO [KR]
• [X] US 2008080261 A1 20080403 - SHAEFFER IAN [US], et al
• See references of WO 2021138329A1

Designated contracting state (EPC)
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DOCDB simple family (publication)
US 11635910 B2 20230425; **US 2021200464 A1 20210701**; CN 114930452 A 20220819; EP 4085458 A1 20221109; EP 4085458 A4 20230531; KR 20220116258 A 20220822; US 2023376235 A1 20231123; WO 2021138329 A1 20210708

DOCDB simple family (application)
US 202017136728 A 20201229; CN 202080091064 A 20201229; EP 20909806 A 20201229; KR 20227024573 A 20201229; US 2020067319 W 20201229; US 202318138527 A 20230424